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THE BIOLOGICAL AND SOCIAL IMPACTS OF BASS TOURNAMENTS

LITERATURE REVIEW AND DISCUSSION

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BASS TOURNAMENTS

INTRODUCTION

There is a growing public concern over impacts of tournament bass fishing on the fishery resource. In an effort to investigate potential social and biological impacts we conducted a literature review of bass fishing tournaments throughout the nation. This brief paper summarizes this information.

METHODS

A review of bass tournament literature was conducted by the Montana State Library system at the request of MDFWP Region One fishery division. The literature search located approximately 30 articles, reports and studies. Eleven pertinent articles were selected for this discussion.

PROBLEMS AND ISSUES

1. Concern by the public over fish mortality and biological impacts associated with tournaments.
2. Friction between tournament and non-tournament anglers.
3. Demand on time and personnel of state agencies to assist tournaments.
4. Poor information exchange between tournament sponsors and state fishery agency.

DISCUSSION

Problem & Issue (1)

Survival of angler caught fish is highly variable but depends largely on temperature. Tournament-related mortalities range from 4-49 percent averaging approximately 10 percent. In northwestern states some authors suggest that 70° F. is the maximum temperature desirable for catch and release tournaments. Situations exist where bass may be caught during cool morning temperatures and held until midday when temperatures become excessive. Tournaments conducted during July and August will result in the highest mortality of released fish.

A concern continues to exist involving the removal of the adults from the nest which will cause high mortality of eggs or fry due to suffocation and predation. Numerous studies have shown that heavily fished lakes do not experience weak or missing year classes as a result of heavy fishing pressure during spawning. In northern latitudes weak year classes already exist due to variable survival from fluctuating climatic conditions and additional loss from tournaments may contribute to mortality.

Overharvest of bass from tournaments was a concern when catch and release was not practiced. A national inquiry from 46 tournaments revealed the each tournament harvested an average of 0.053 pounds of bass per acre, which is roughly 1 percent of the mean yearly bass harvest for waters examined.

Problems and Issue (2)

Conflict between tournament and non-tournament anglers continues to be an issue. The general public felt that tournament anglers did not respect non-tournament anglers fishing particular spots. They also felt that boats racing to particular areas was dangerous and offensive to other anglers. The public also felt that campsites, boat ramps, and docks, were at times dominated by cliquish groups of tournament anglers.

Problem and Issue (3)

State agency personnel (DFWP) will not tag fish for tournaments in Montana. Data collection by DFWP personnel will be at their discretion depending upon needs. Minimally, we would like fish length and weight, and the number of daily fishing hours per fisherman and the total number of fish caught.

Problem and Issue (4)

Participant preoccupation with fishing, winners, and winning, overshadows the obligation some sponsors feel toward the resource. This jeopardizes the accuracy of possible data collection; may negatively impact the fishery and create a poor image.

RECOMMENDATIONS

A. Max prize money @ 15,000. Will reduce attraction to out-of-state anglers and reduce overall pressure and avoid climate of intense competition where social problems are most severe.

B. Limit participation per tournament based on host water size.

Size (acres)	Max. Number of Contestants
300 or less	25
301 - 3,000	50
3,001 - 6,000	100
6,001 - 10,000	150
> 10,000	200

Based on premise that angler conflicts were not obvious at past use levels and some increase could be acceptable without problems.

Also limit contests to maximum of three days and limit the number on each water per year.

C. Reduction of Fish Mortality

Tournaments should ideally be scheduled to avoid extremes of water temperature. In northwest Montana, these consistently occur during August.

The use of total length measurements, verification by the other angler, and immediate release is the most favorable method to reduce bass mortality.

It may be desirable to use a combination of measure-release and weigh-in. In this case, each angler may keep the largest one or two bass caught in a livewell for weigh-in and measure and release all other bass. The total weight is equal to converted lengths of released fish plus the weighed-in fish.

Livewells provide a temporary holding facility for weigh-in tournaments. A central weigh-in facility would ideally be roving on the water and would effectively reduce transport and holding time and disperse released fish. Boat operation also has potential to severely stress livewell fish. A live-release policy should also be in effect enforced by a dead fish penalty.

A central weigh-in is the least desirable method for tournament scoring. If they must be used they must have an adequate holding facility either in the lake or in an aerated, tempered, holding tank that meets capacity recommendations (1 gallon water/1 pound fish). The fish release site must be adjacent to good quality water with depths exceeding twenty feet. Release sites must also be located away from busy public use areas.

The majority of tournament-caught bass that die are a result of stress from angler negligence and inadequate livewell systems. Proper livewells should measure at least 18" long, 12" deep, and 12" wide and be fitted with aerators and fresh water pumps. A mandatory inspection should be held before each tournament for qualification. Livewell additives are recommended by many, however, chemicals within these additives are not approved by the USFDA for use on food fish. Therefore, the use of salt is recommended which stimulates mucus secretion. Sea salt is preferred, but rock salt or uniodized table salt is effective. Salt is added to a holding tank or livewells at a rate of 0.5% (0.7 ounces of salt/gallon water).

The confinement time of fish in livewells should be minimized to prevent stress. Total livewell capacity should be at least 1 gallon of water for 2 pounds of fish. Studies also concluded that levels of dissolved oxygen in livewells reached critical levels when pumps were not operated continuously.

Livewell temperatures should optimally equal the natural lake temperature. During warm summer days, uninsulated tanks tend to warm rapidly and ice may be required to match temperatures.

Another strategy used to minimize stress in livewells is a reduced limit. Northwestern Montana possession limits generally allow 5 bass daily.

SUMMARY

The following is a list of prioritized tournament recommendations.

1. Minimize tournament participation to recommended levels to reduce impacts.
2. Use all means possible to reduce fish stress and mortality.
    A. Schedule tournaments to avoid temperature extremes.
    B. Immediate release tournaments.
    C. Dead fish penalties.
    D. Requirement of aerated, circulating livewells with capacity of 1 gallon of water/2 pounds of fish (minimum size of 18" x 12" x 12"). Suggest using sea salt in live wells at concentration of 0.7 ounces/gallon.
    E. Rank scores by length for small fish and weight for 2 largest fish.

F. Maintain roving weigh-in facility with immediate release.

G. Provide adequate central weigh-in facility.

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